NASA Weekly Update

Week of June 19-23, 2006

6-23: NASA Space Shuttle Discovery's Launch Countdown Begins June 28: The countdown includes nearly 28 hours of built-in hold time leading to a scheduled launch at about 3:49 p.m. on July 1. The launch window extends for nearly five minutes. The launch team at NASA's Kennedy Space Center, Fla., will conduct the countdown from the newly renovated Firing Room 4 of the Launch Control Center. This

STS-121 crew patch

mission is designated STS-121. It is the 115th shuttle flight and the 18th U.S. flight to the International Space Station. Discovery's mission is scheduled to last about 12 days and end with a 10:45 a.m. landing at Kennedy on July 13. The crew will test new equipment and procedures to improve shuttle safety, as well as deliver supplies and make repairs to the International Space Station. For information about the STS-121 crew and its mission to the International Space Station, visit: http://www.nasa.gov/shuttle.

6-23: NASA Announces Space Shuttle Web and Television Coverage: NASA Television and the agency's home on the Internet, http://www.nasa.gov, will provide extensive pre-launch and launch day coverage of the space shuttle Discovery's mission STS-121 to the International Space Station, currently scheduled for a July 1 launch. For detailed television scheduling information, visit the web at http://www.nasa.gov/ntv.

6-21: NASA's Chandra Solves Black Hole Paradox: Black holes light up the universe and astronomers may finally know how. New data from NASA's Chandra X-ray Observatory show for the first time powerful magnetic fields are the key to these brilliant and startling light shows. It is estimated up to one quarter of the radiation in the universe emitted since the big bang comes from material falling towards supermassive black holes, including those powering quasars, the brightest known objects. For decades, scientists have struggled to understand how black holes can be responsible for such prodigious amounts of radiation. For additional information about the research and images, visit: http://chandra.nasa.gov and http://chandra.harvard.edu.

6-20: NASA and Partners Help Send Kids to Summer Camp: NASA, Exxon and the Bernard Harris Foundation formed a partnership to send 85 minority middle school students to the Bernard Harris Summer Science Camp. The students are from the Houston Independent School District and Oklahoma Native American tribal schools. For information about NASA's education programs, visit: http://www.nasa.gov/education.

6-20: NASA Sends Explorer School Teachers Spaceward Bound: NASA is taking teachers to a barren desert in Chile to help inspire the next generation of explorers. The expedition is part of the Spaceward Bound pilot program, which challenges teachers to design and implement real field research. Spaceward Bound is funded by NASA's Exploration Systems Mission Directorate. To learn more about the expedition and view the webcasts, visit: http://quest.nasa.gov/projects/spacewardbound. For information about NASA's Explorer Schools Program, visit: http://explorerschools.nasa.gov.

6-19: NASA Assigns Crew for Shuttle Mission: NASA has assigned crew members to the space shuttle flight that will launch an Italian-built U.S. module for the International Space Station. Air Force Col. Pamela A. Melroy will command the STS-120 mission to take the Node 2 connecting module to the station. Melroy, a veteran shuttle pilot, is the second woman to command a shuttle. Marine Corps Col. George D. Zamka will serve as pilot. The flight's mission specialists will be Scott E. Parazynski, Army Col. Douglas H. Wheelock, Navy Capt. Michael J. Foreman and Paolo A. Nespoli, a European Space Agency astronaut from Italy. Zamka, Wheelock, Foreman and Nespoli will be making their first spaceflight. For complete astronaut biographical information, visit: http://www.jsc.nasa.gov/Bios. For more information about space shuttle missions and crews, visit http://www.nasa.gov/shuttle.

Weekly Status Reports

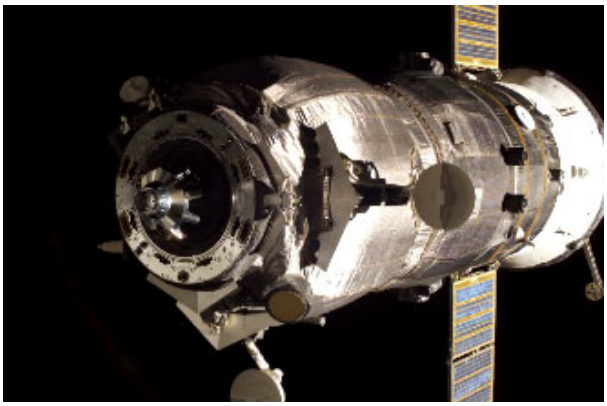
International Space Station (ISS)

The International Space Station crew this week bid farewell to one cargo craft and prepared for the arrival of another. The crew also continued to prepare for the arrival of the Space Shuttle Discovery, which is set for launch July 1.

The Progress 22 cargo spacecraft launched on time Saturday morning at 11:08 a.m. EDT from Baikonur Cosmodrome in Kazakhstan. The resupply ship is delivering propellant, oxygen, water and other cargo. Docking with the International Space Station is scheduled for Monday, June 26 at 12:27 p.m.

Vinogradov took a refresher course on the Toru manual docking system Monday. Vinogradov would use the system to guide the cargo craft in the event its primary automated docking system did not function properly. Throughout the week the station crew also prepared for Discovery's anticipated arrival. On Tuesday, Vinogradov and Williams reviewed the timeline of activities for the shuttle mission and held a conference with mission experts on the ground. On Friday, the crew continued to prepare U.S. spacesuits that will be used during the shuttle visit.

They also continued to pack equipment that will be returned to Earth on Discovery. On Wednesday, Williams installed the centerline berthing camera



The Progress 20 cargo spacecraft is pictured departing the International Space Station.

system in a window of the station's Unity connecting module. The camera view will assist with the attachment of a pressurized logistics module named Leonardo, which will be carried aboard Discovery to that module's port. The Leonardo module will be attached to Unity for unloading and reloading during the mission. It will be loaded in Discovery's cargo bay for the trip home.

Also on Wednesday, Vinogradov worked with the Russian experiment that studies self-propagating combustion materials. The investigation looks at mechanisms for forming high-porosity, heat-resistant, thermal insulating materials for spacecraft. Williams spent more than three hours Thursday on station robotic arm activities, first training with a simulation program on a laptop computer and then exercising the arm itself. Supported by flight controllers on the ground, he moved the Canadarm2 in much the same way he will during Discovery's visit. He left it parked in position for Discovery's arrival.For more about the crew's activities and station sighting opportunities, visit: http://www.nasa.gov/station.

Upcoming Events

--July 1: Launch of Space Shuttle Discovery, STS-121
--July 20: Mars Viking Anniversary Event in the Rayburn Foyer.

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